

Attorney Docket No.: 021245-001000US  
Client Ref. No.:

PTO/SB/01A (08-03)

**DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN  
APPLICATION DATA SHEET (37 CFR 1.76)**

**Title of Invention**

**MIMO TCM WITH CONSTELLATION ROTATION AND COORDINATE  
SWAPPING**

As the below named inventor(s), I/we declare that:

This declaration is directed to:

- ☐ The attached application, or
- ☒ Application No. 10/643,756, filed on August 18, 2003,
- ☐ as amended on \_\_\_\_\_ (if applicable);

I/we believe that I/we am/are the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought;

I/we have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment specifically referred to above;

I/we acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me/us to be material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT International filing date of the continuation-in-part application.

All statements made herein of my/our own knowledge are true, all statements made herein on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001, and may jeopardize the validity of the application or any patent issuing thereon.

**FULL NAME OF INVENTOR(S)**

Inventor 1 James Gardner

Date:

9/25/03

Signature: 

Citizen of:

United States

Inventor 2 \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Citizen of: \_\_\_\_\_

Inventor 3 \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Citizen of: \_\_\_\_\_

Inventor 4 \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Citizen of: \_\_\_\_\_

☐ Additional inventors are being named on additional form(s) attached hereto.



<b>POWER OF ATTORNEY OR AUTHORIZATION OF AGENT</b>	<b>Application Number</b>	10/643,756
	<b>Filing Date</b>	August 18, 2003
	<b>First Named Inventor</b>	Gardner, James
	<b>Title</b>	MIMO TCM WITH CONSTELLATION ROTATION AND COORDINATE SWAPPING
	<b>Art Unit</b>	2661
	<b>Examiner Name</b>	Unassigned
	<b>Attorney Docket Number</b>	021245-001000US

I hereby appoint:

☒ Practitioners at Customer Number  
OR

20350

☐ Practitioner(s) named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:

☒ The above-mentioned Customer Number.

OR

☐ The address associated with Customer Number:

--

OR

☐ Firm or  
Individual Name

Address

Address

City

State

ZIP

Country

Telephone

(650) 326-2400

Fax

(650) 326-2422

I am the:

☐ Applicant/Inventor.☒ Assignee of record of the entire interest. See 37 CFR 3.71.  
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).**SIGNATURE of Applicant or Assignee of Record**

Name

VK Jones  
Vice President, DSP & ASIC Design Engineering

Signature

Date

10/8/03

Telephone

(650) 475-1900

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

☒ \*Total of 1 forms are submitted.

DEC 15 2003

**STATEMENT UNDER 37 CFR 3.73(b)**

Applicant/Patent Owner: James Gardner et al.

Application No./Patent No.: 10/643,756

Filed/Issue Date: August 18, 2003

Entitled: MIMO TCM With Constellation Rotation And Coordinate Swapping

Airgo Networks, Inc., a Corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest.  
The extent (by, percentage) of its ownership interest is \_\_\_\_\_%

in the patent application/patent identified above by virtue of either:

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

OR

- B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

2. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

- ☒ Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.8]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

10/8/03

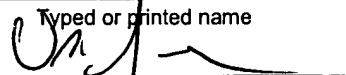
Date

(650) 475-1900

Telephone number

VK Jones

Typed or printed name



Signature

Vice President, DSP &  
ASIC Design Engineering

Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

ASSIGNMENT OF PATENT APPLICATION

SOLE

WHEREAS, James Gardner of 132 Woodland Valley Drive, San Ramon, CA 94583 hereinafter referred to as "Assignor," is the inventor of the invention described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: MIMO TCM WITH CONSTELLATION ROTATION AND  
COORDINATE SWAPPING

Filing Date: August 18, 2003

Application No.: 10/643,756; and

WHEREAS, Airgo Networks, Inc., a corporation of the state of Delaware, located at 900 Arastradero Road, Palo Alto, CA, 94304, hereinafter referred to as "ASSIGNEE," is desirous of acquiring an interest in the invention and application and in any U.S. Letters Patent and Registrations which may be granted on the same;

For good and valuable consideration, receipt of which is hereby acknowledged by Assignor, Assignor has assigned, and by these presents does assign to Assignee all right, title and interest in and to the invention and application and to all foreign counterparts (including patent, utility model and industrial designs), and in and to any Letters Patent and Registrations which may hereafter be granted on any patent application claiming priority from the same in the United States and all countries throughout the world, and to claim the priority from the application as provided by the Paris Convention. The right, title and interest is to be held and enjoyed by Assignee and Assignee's successors and assigns as fully and exclusively as it would have been held and enjoyed by Assignor had this Assignment not been made, for the full term of any Letters Patent and Registrations which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignor further agrees that Assignor will, without charge to Assignee, but at Assignee's expense, (a) cooperate with Assignee in the prosecution of U.S. Patent applications and foreign counterparts on the invention and any improvements, (b) execute, verify, acknowledge and deliver all such further papers, including applications and instruments of transfer, and (c) perform such other acts as Assignee lawfully may request to obtain or maintain Letters Patent and Registrations for the invention and improvements in any and all countries, and to vest title thereto in Assignee, or Assignee's successors and assigns.

IN TESTIMONY WHEREOF, Assignor has signed his/her name on the date indicated.

Dated: 9/25/03

  
James Gardner